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| 09/851,177 | 05/08/2001 | X.D. Hu | ZL494/01001 | 2722 |
| 34160 | 7590 | 07/25/2007 | EXAMINER | |
| SUD-CHEMIE INC. 1600 WEST HILL STREET LOUISVILLE, KY 40210 | | | NGUYEN, CAM N | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1754 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/851,177

Applicant(s)

HU ET AL.

Examiner

Cam N. Nguyen

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/09/07 (an amendment/response).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 35-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 35-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on originally filed is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' amendments and remarks, filed on 05/09/07, have been made of record and entered. Claims 1, 6, 11, 16, & 22-23 have been amended. Claims 26-34 have been canceled. Claims 35-46 have been added.

Claims 1-25 & 35-46 are currently pending and under consideration.

Claim Objections

2. Claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 17 recites "said cobalt (II) complex is hexaammine cobalt (II) carbonate". It appears that "hexaammine cobalt (II) carbonate" is not one of the complex compound listed in claim 16.

Claim Rejections - 35 USC § 112 (second paragraph)

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1754

4. Claims 1-10, 16-17, & 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claim 1 recites the limitation "the metal oxide" in line 6. There is insufficient antecedent basis for this limitation in the claim.

B. In claims 16 & 39, the proper Markush terminology is --wherein said cobalt (II) complex has coordination sphere ligands selected from the group consisting of water molecules, ammonia, pyridine, diamineoethane, diethylenetriamine, triethylenetetraamine, and combinations thereof--.
See MPEP § 2173.05(h).

Claim Rejections - 35 USC § 102(b)/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-12, 14-21, 23, 25, & 35-46 are rejected under 35 U.S.C. 102(b) as anticipated
by or,

Art Unit: 1754

in the alternative, under 35 U.S.C. 103(a) as obvious over Shen et al., "hereinafter Shen", (US Pat. 5,962,367):

Shen discloses a cobalt molybdate catalyst supported on a titania support (see col. 5, In 2-8). The support contains titania and has a surface area ranging from 80 to 200 m²/g, a pore volume ranging from 0.3 to 0.5 ml/g, and a pore diameter ranging from 60 to 200 Å (equivalent to 6-20 nm) (see col. 3, In 1-6).

Regarding claims 11 & 15-21, recitation of product-by-process limitations in the claims is noted. While the catalyst of the reference is not made by the same process, the catalyst made is the same as the claimed catalyst. Further, it has been held that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method or production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even the prior art product was made by a different process." See *In re Thorp*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 12, the claim is met by the reference since Shen teaches a titania support, which is one of the support materials being claimed.

Regarding claim 14, the claimed support properties are met by the teaching of the reference since the disclosed surface area, pore volume, pore diameter, etc. fall within the claimed ranges (see Shen at col. 3, In 1-6).

Art Unit: 1754

Regarding claims 23 & 25, the claims require the catalyst further including a promoter is noted. It is considered the molybdenum disclosed by Shen is the claimed promoter in view of a lack of a specific promoter being claimed in these claims. Thus, the claims are met.

7. Claims 11-13, 15-21, 23-25, 35-36, & 38-46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sapienza et al., "hereinafter Sapienza", (US Pat. 4,396,539).

Sapienza discloses a catalyst consisting essentially of cobalt and palladium or platinum or mixtures thereof supported on a solid phase selected from the group consisting of alumina, silica gel, kieselguhr, and zinc oxide (see col. 14, claim 3).

Regarding claims 11-13 & 15-21, recitation of product-by-process limitations in the claims is noted. While the catalyst of the reference is not made by the same process, the catalyst made is the same as the claimed catalyst. Further, it has been held that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method or production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even the prior art product was made by a different process." See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claims 23-25, the claims are met by the reference since Sapienza discloses platinum, which is the claimed promoter.

Response to Applicants' Arguments

8. Applicants' amendment and remarks filed on May 09, 2007 has been fully considered, but not deemed persuasive in view of the new ground of rejection(s) and/or objection(s) above and the following reasons.

Applicants' newly added claim 35 including the limitation on "coating said particles with oil" in the last line of the claim as being step (h) of the process is noted. It would appear that this is a process of making limitation and not a catalyst limitation. Claim 35 is called for "a catalyst" and not a process of preparing a catalyst, this recitation has no bearing on the patentability of the claimed catalyst.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1754

Conclusion

10. Claims 1-25 & 35-46 are pending. Claims 1-25 & 35-46 are rejected. No claims are allowed.

Contacts

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cam N Nguyen, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Nguyen/cnn

Primary Examiner

July 23, 2007

Art Unit: 1754